



Utah Department of Transportation Traffic Management Division

March 2018

Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov



Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

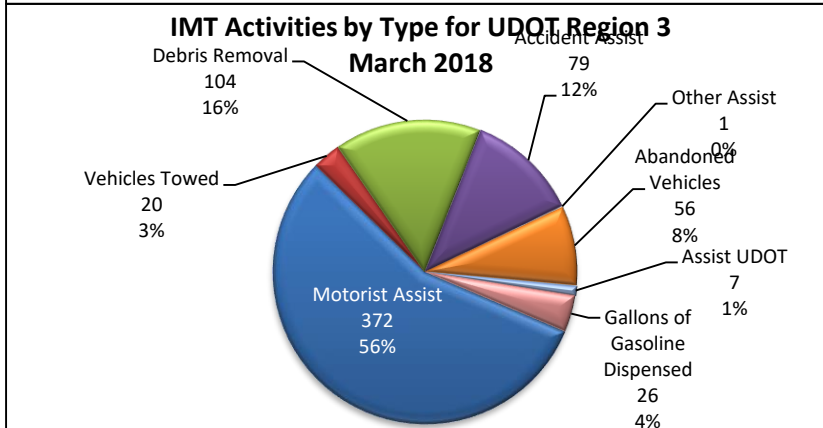
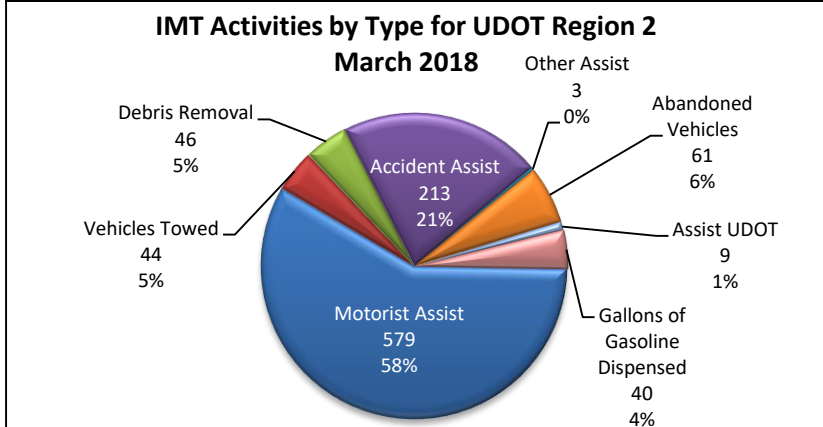
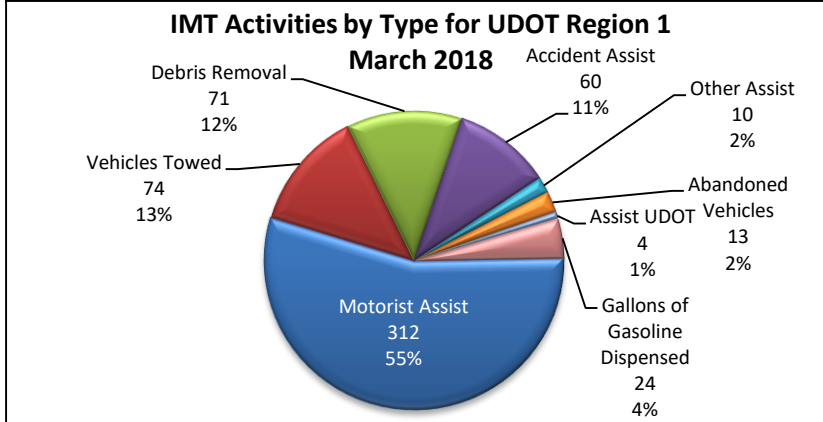
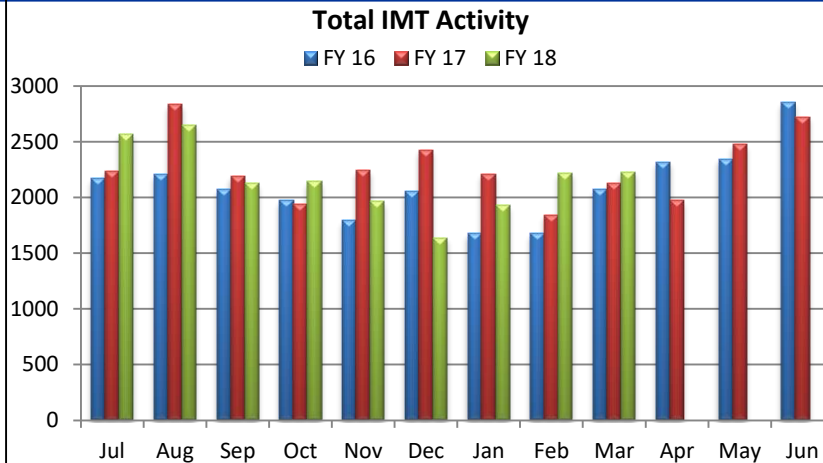
Field Devices Summary

Freeway PTZ Cameras	402	Freeway VMS	104
Arterial PTZ Cameras	576	Surface Street VMS	50
RWIS & Contracted Weather Cameras	234	Portable TOC VMS	7
Viewable Detection Cameras	37	Legacy Trucks Prohibited VMS	21
Total Cameras	1,249	Variable Speed Limit VMS	15
HAR (25 permanent/5 portable)	30	Chain-Up/Avalanche Warning Signs	25
RWIS	110	Total VMS	222
Ramp Meters	76	TMS	606
Express Lane Plazas	73	Traffic Signals	1,887

Operations Summary

VMS Messages Displayed	94,994	IMT Assists	2,228
Signal Timing Work Orders	35	Website Visitor Sessions	365,526
Signal Maintenance Work Orders	166	511 Calls	22,158
All New Work Orders	669	Weather Desk Calls	715
Incident Responses by the TOC	1,623	Ask CommuterLink Questions	80
Incident Duration Average Minutes	55	UDOT Traffic Followers and Re-tweets	1,039,643

Incident Management Team (IMT) Activities



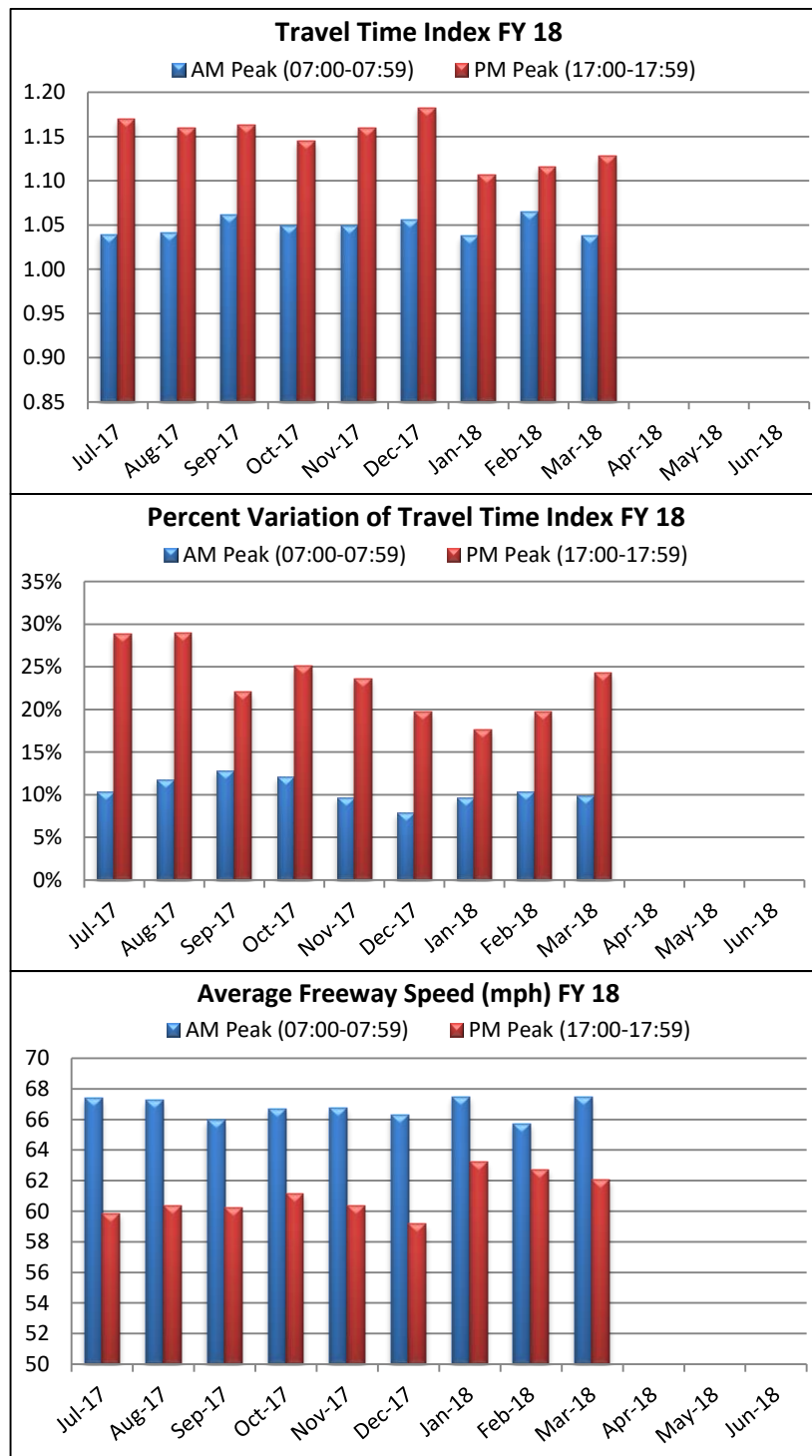
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.



Freeway Traffic Level of Service

Peak Travel Time Index by Segment for March 2018

(+) Direction (NB, EB, Clockwise)

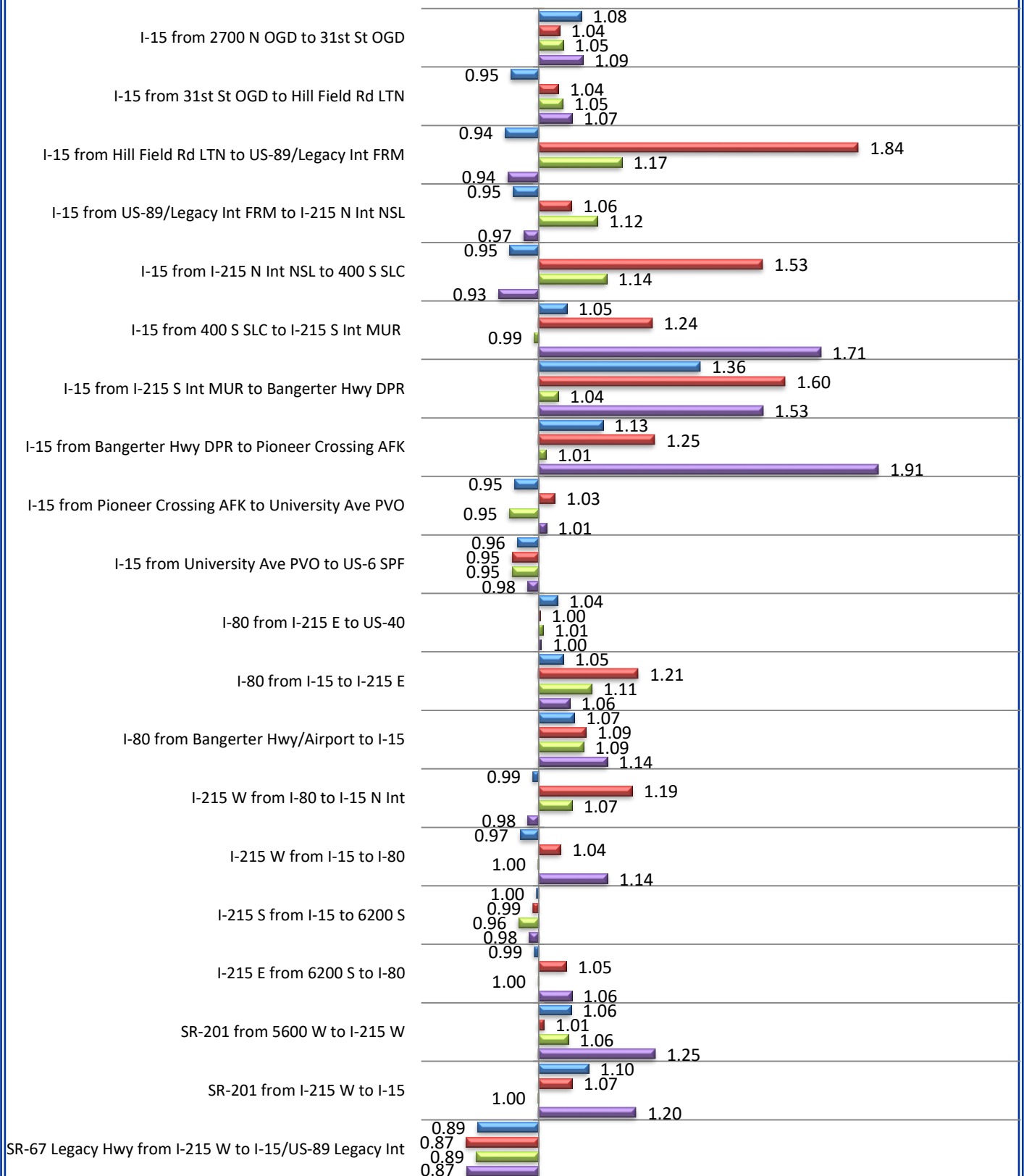
(-) Direction (SB, WB, Counter Clockwise)

■ AM Peak (07:00-07:59)

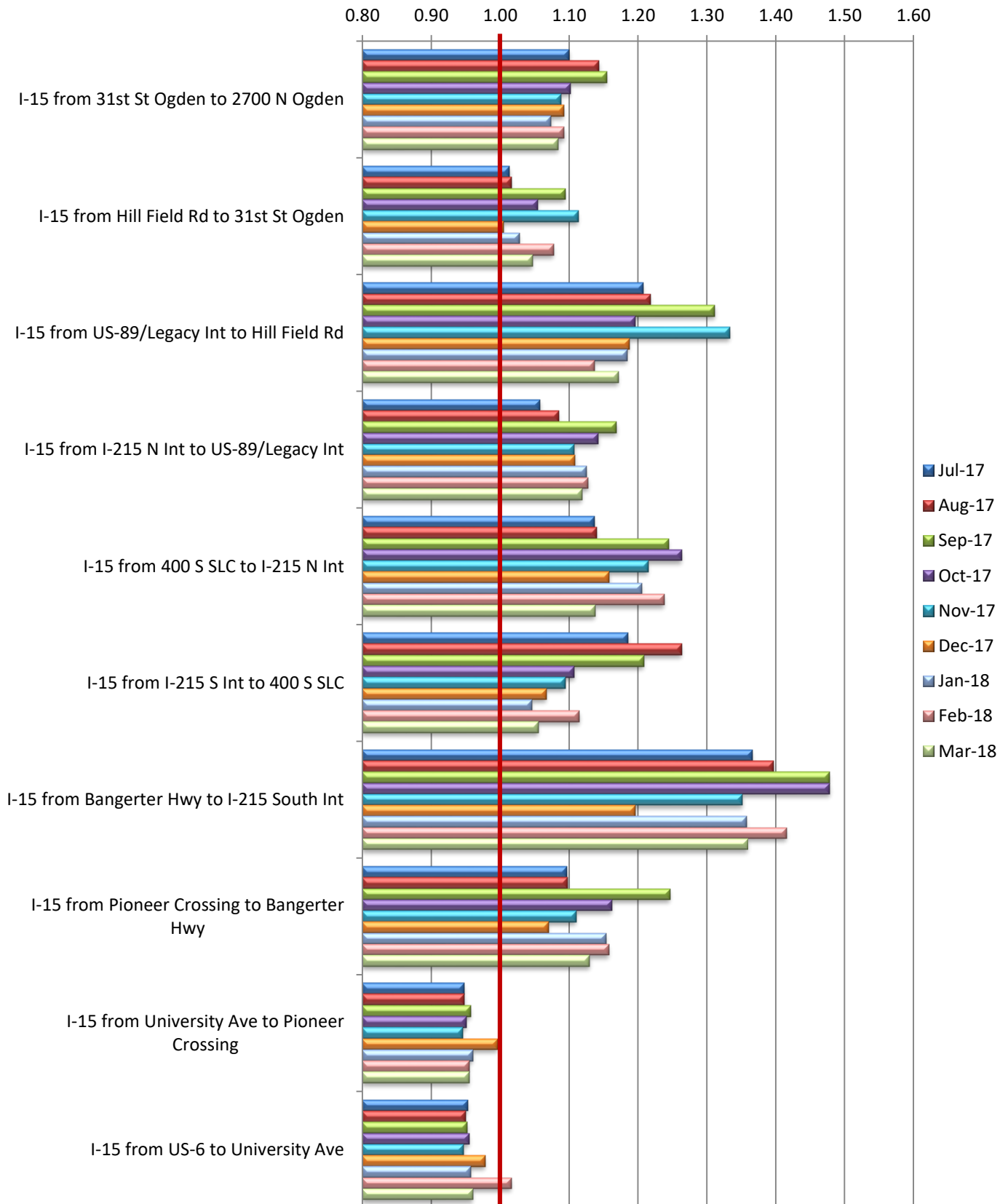
■ PM Peak (17:00-17:59)

■ AM Peak (07:00-07:59)

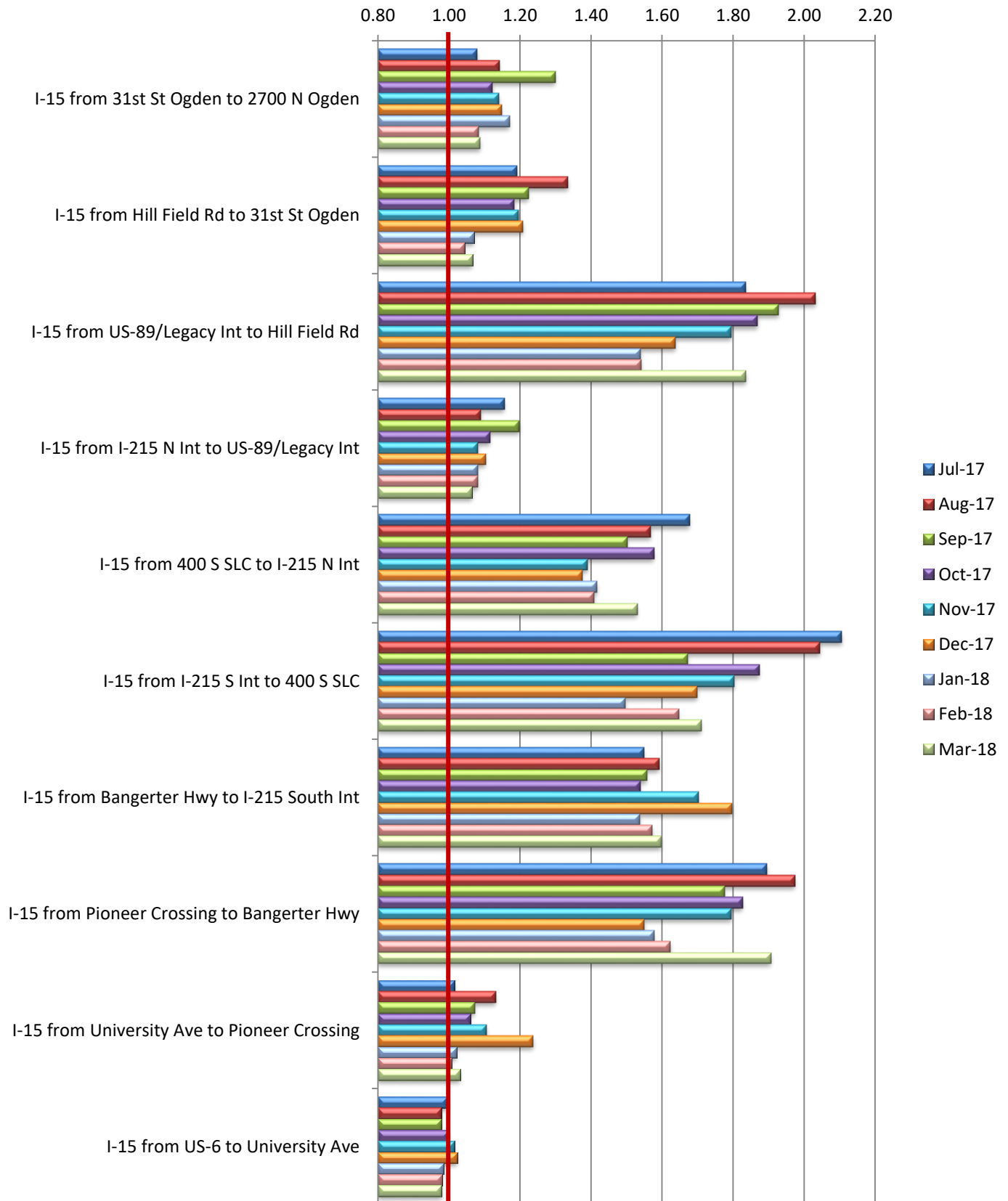
■ PM Peak (17:00-17:59)



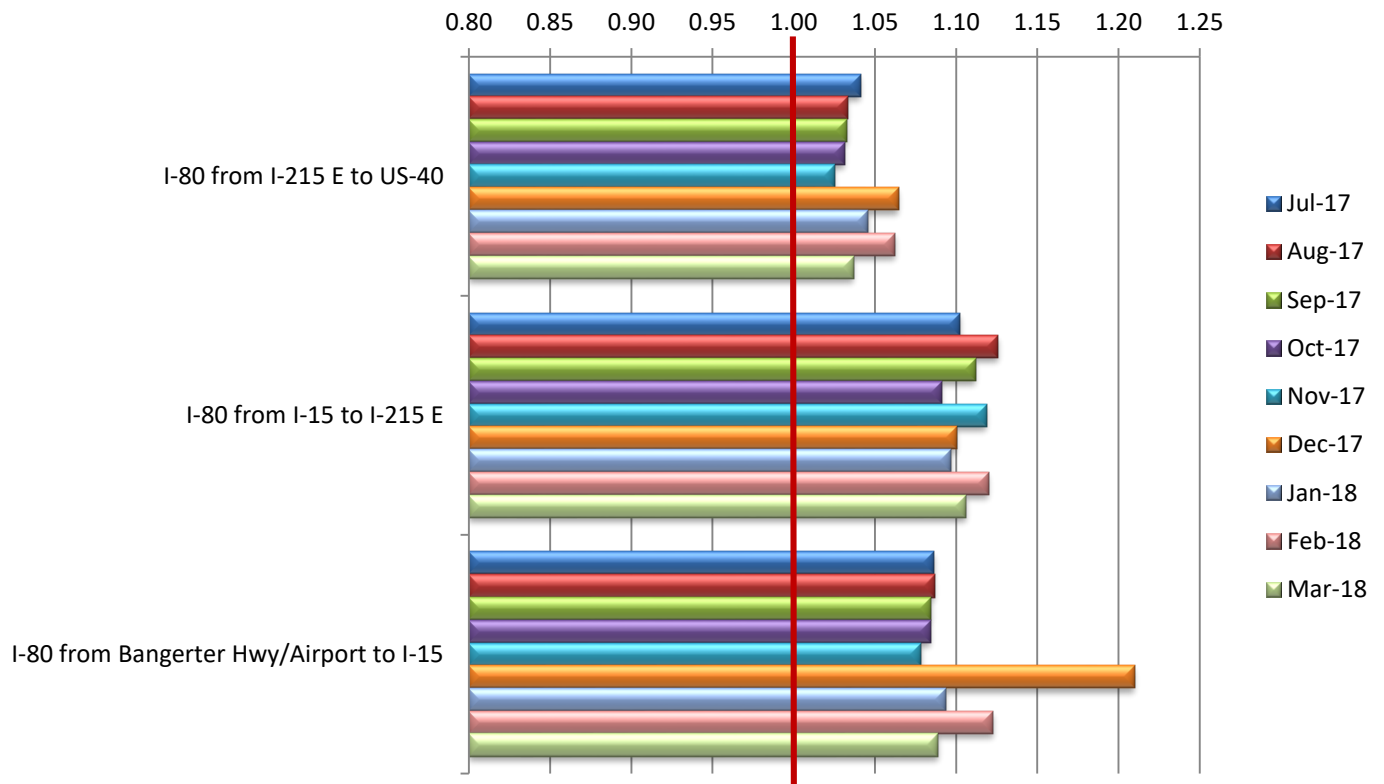
AM Peak Travel Time Index for I-15 FY 18



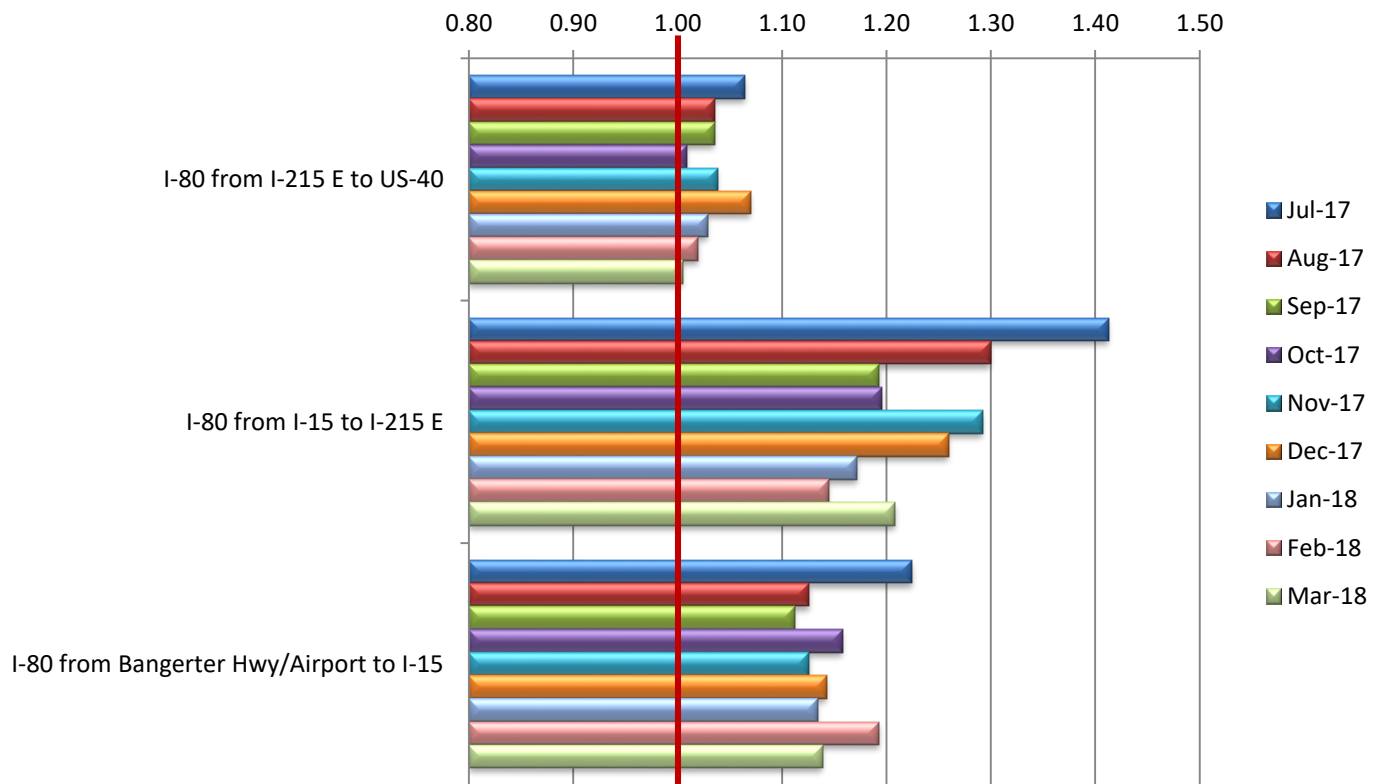
PM Peak Travel Time Index for I-15 FY 18



AM Peak Travel Time Index for I-80 FY 18

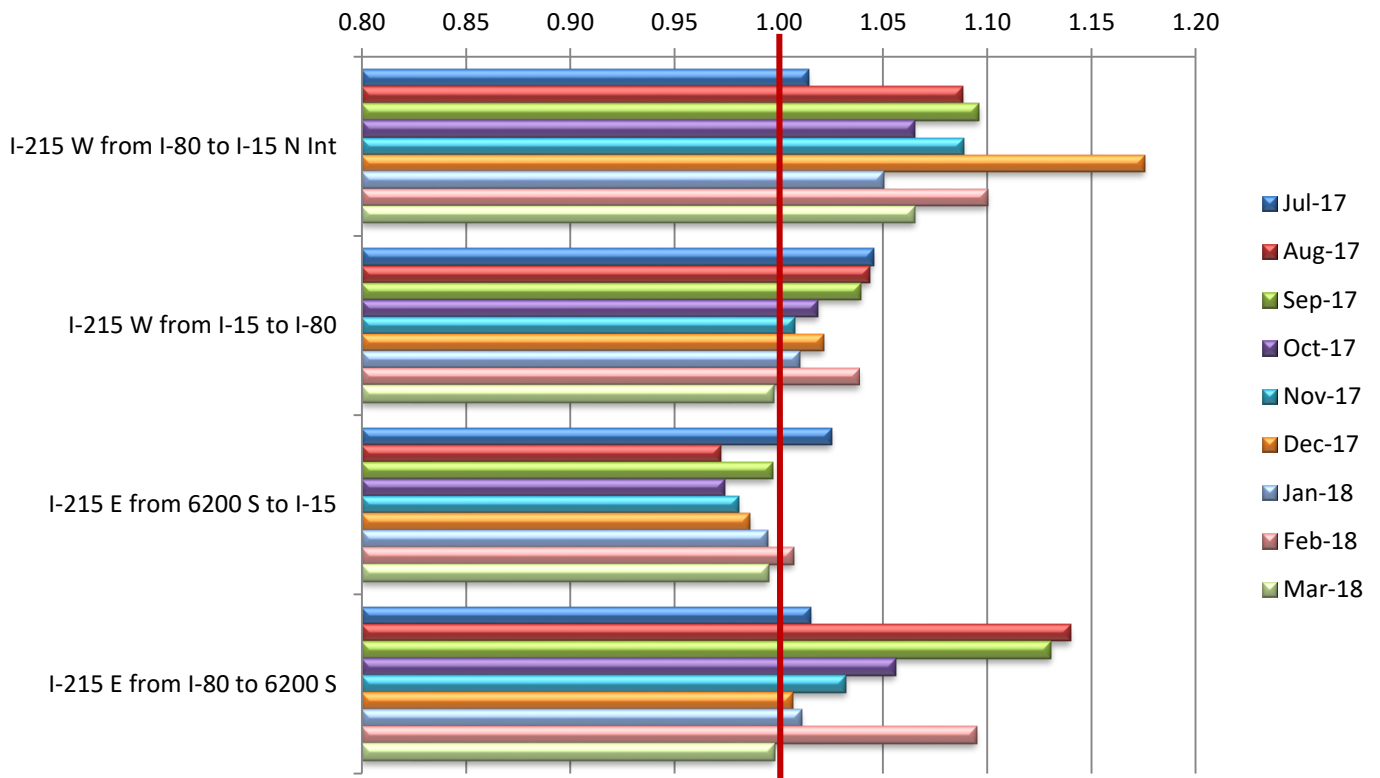


PM Peak Travel Time Index for I-80 FY 18

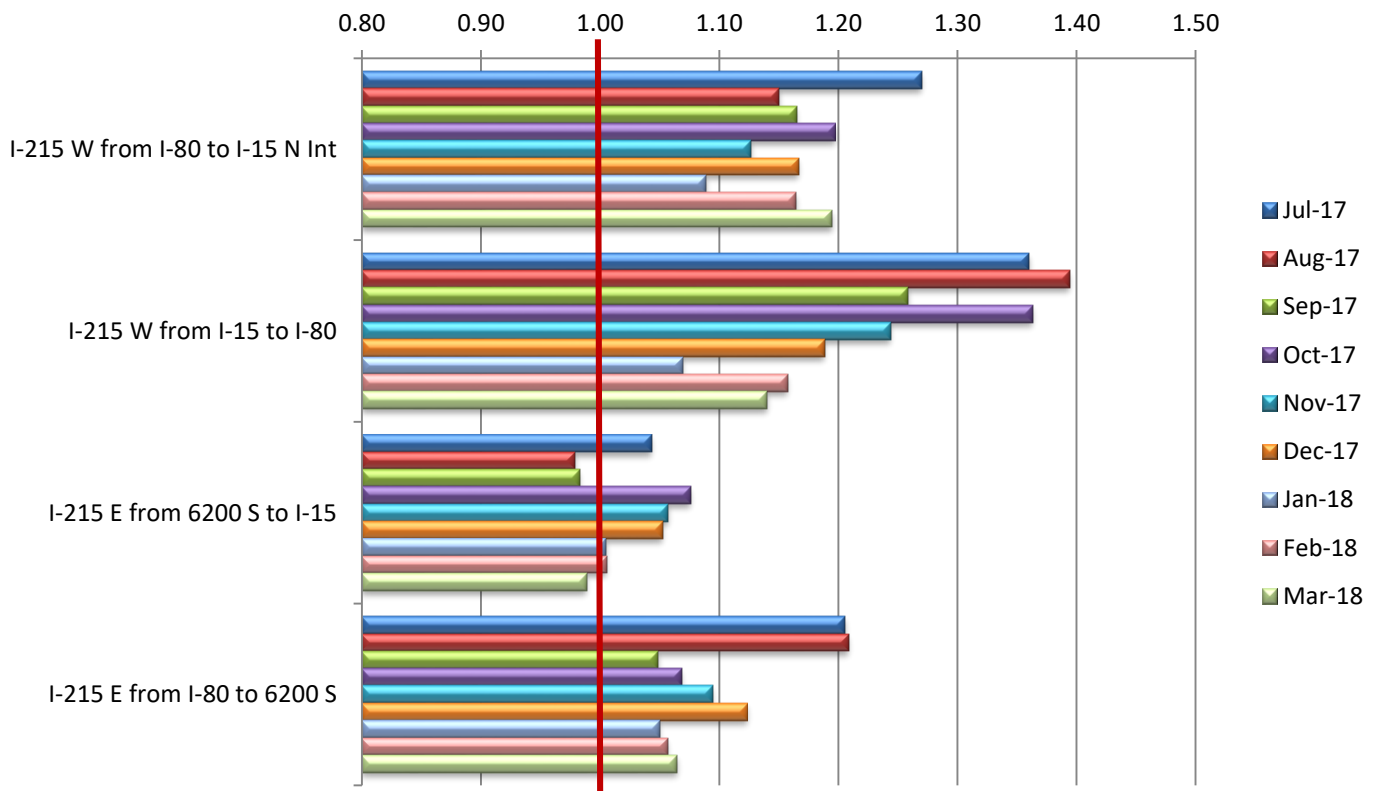


Freeway Traffic Level of Service

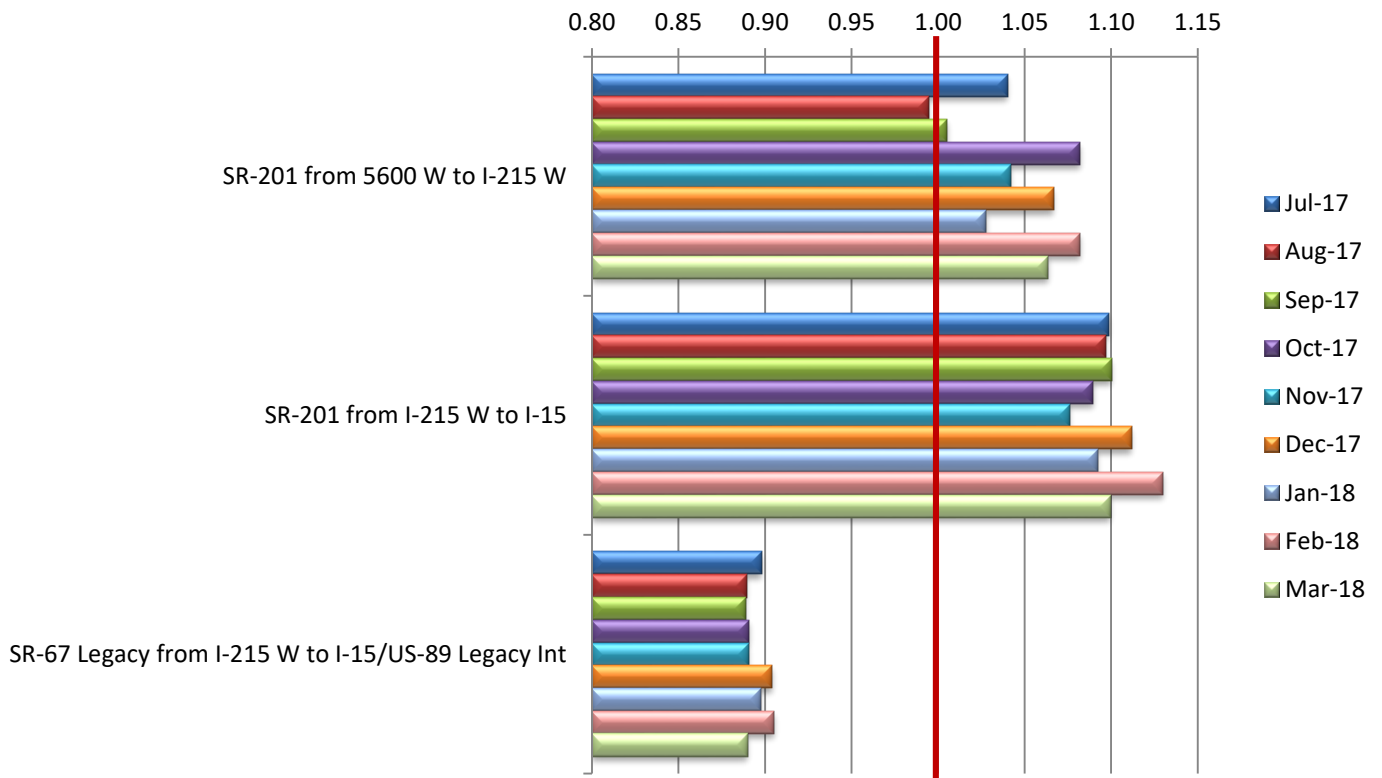
AM Peak Travel Time Index for I-215 FY 18



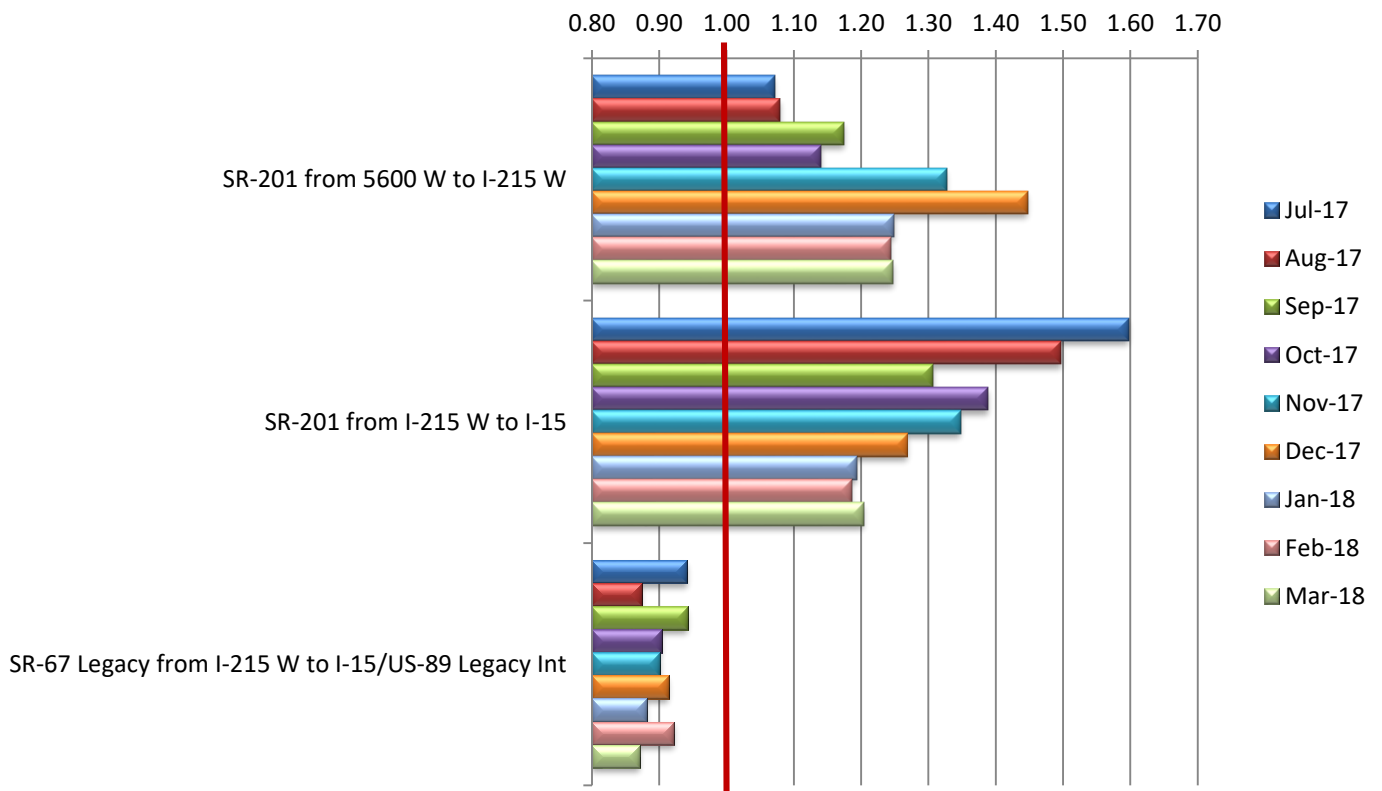
PM Peak Travel Time Index for I-215 FY 18



AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18

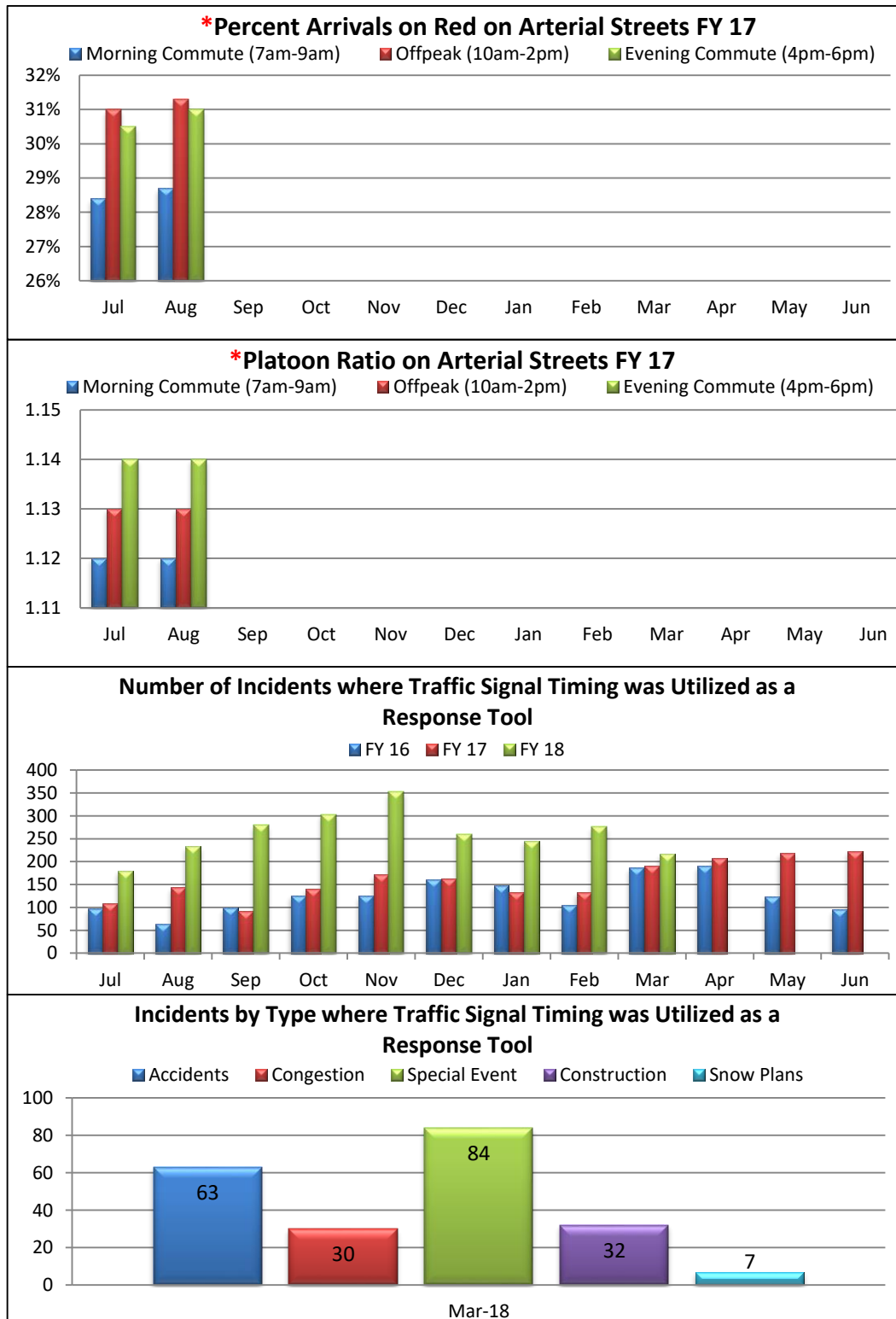


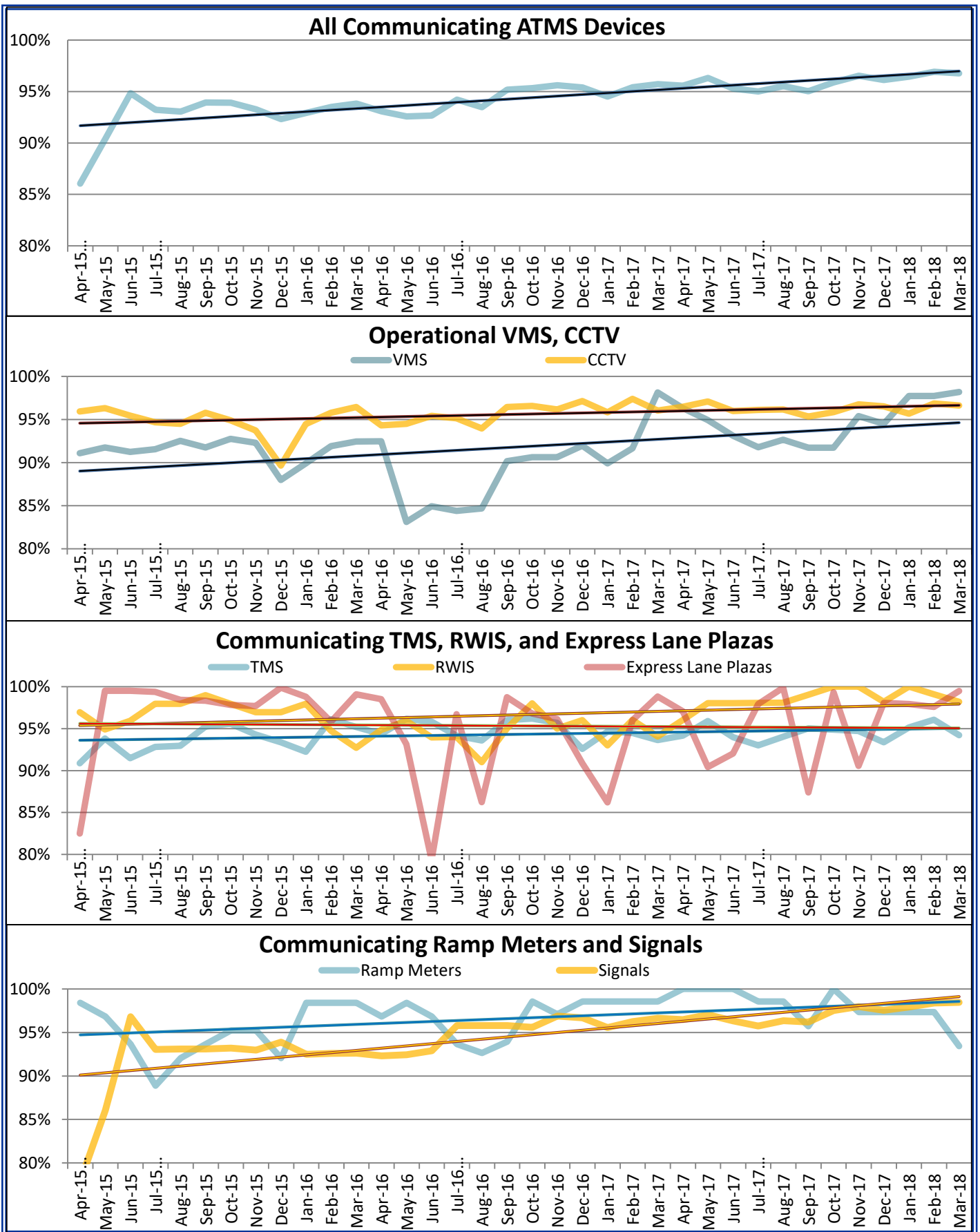
PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18

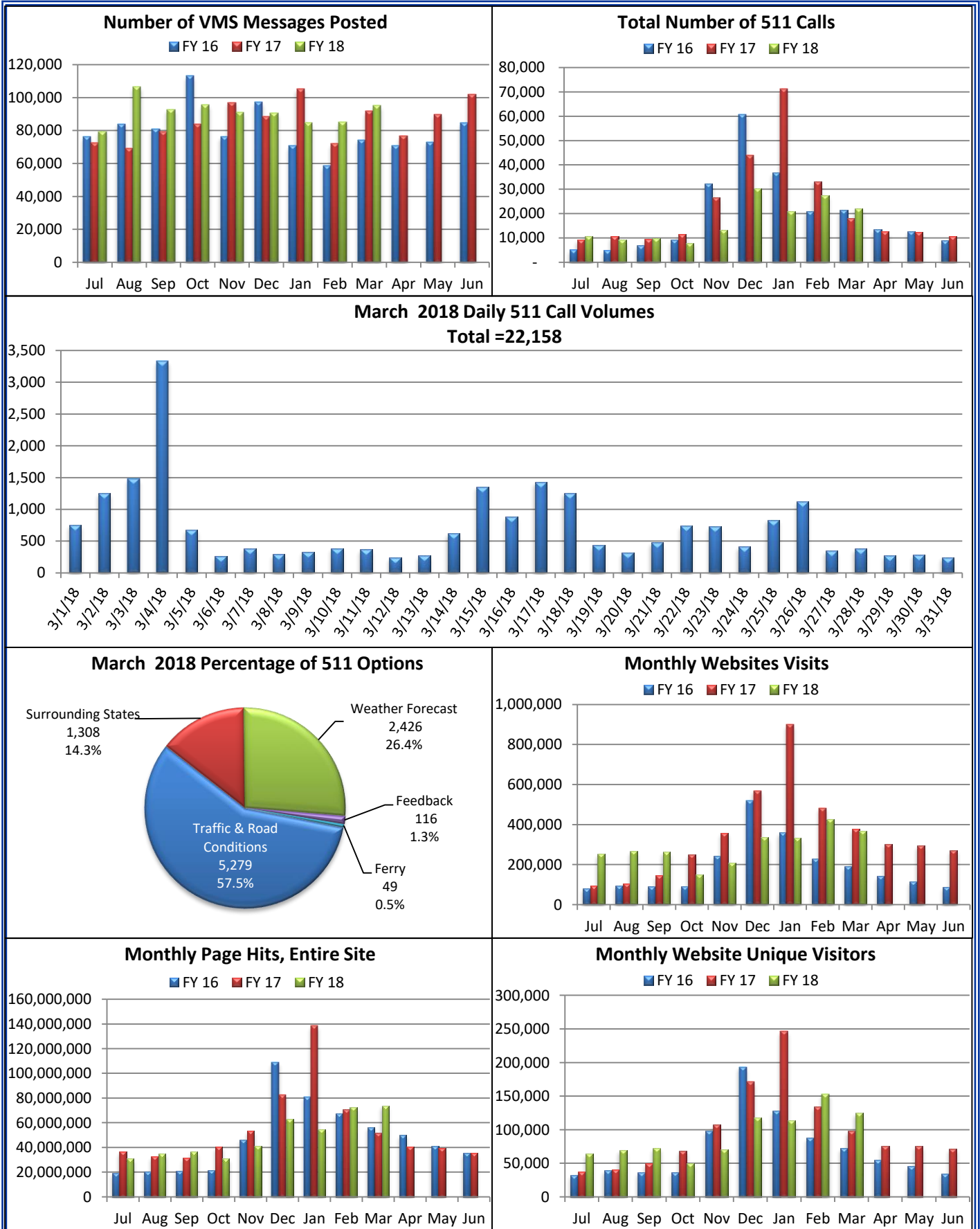


Arterial Traffic Level of Service * No data available since Aug 2016

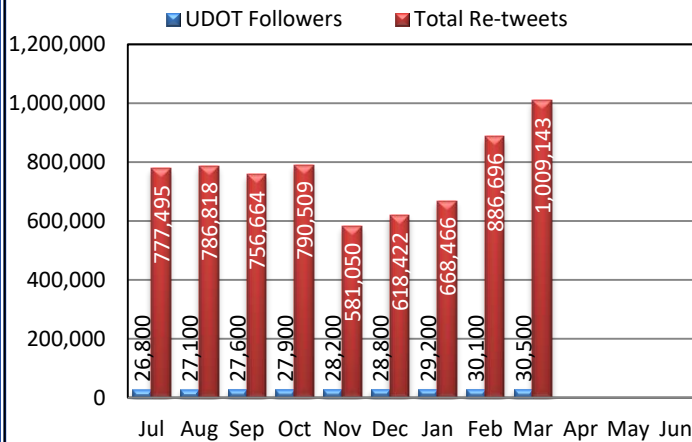
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.



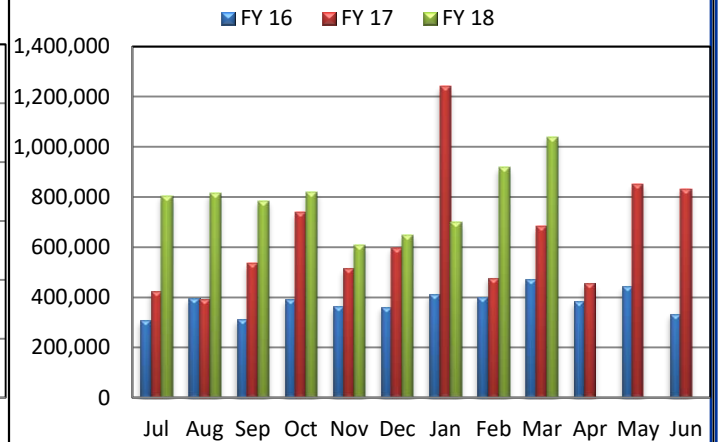




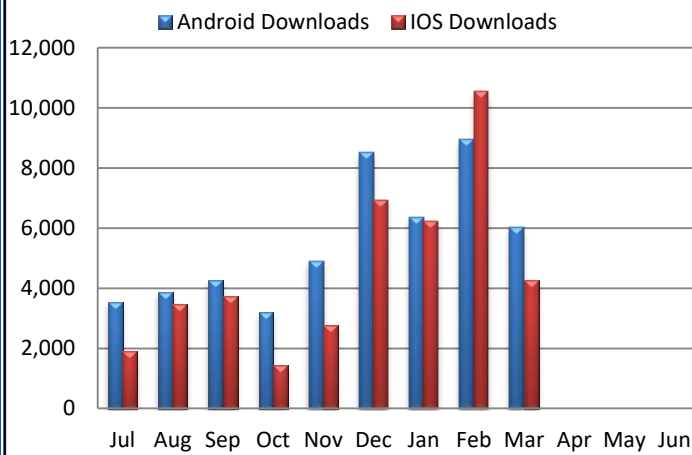
UDOT Traffic Twitter Activity - FY 18



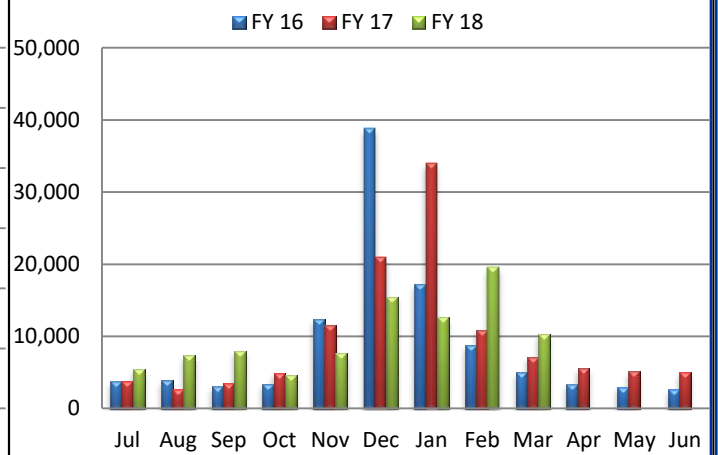
UDOT Traffic Followers and Re-tweets



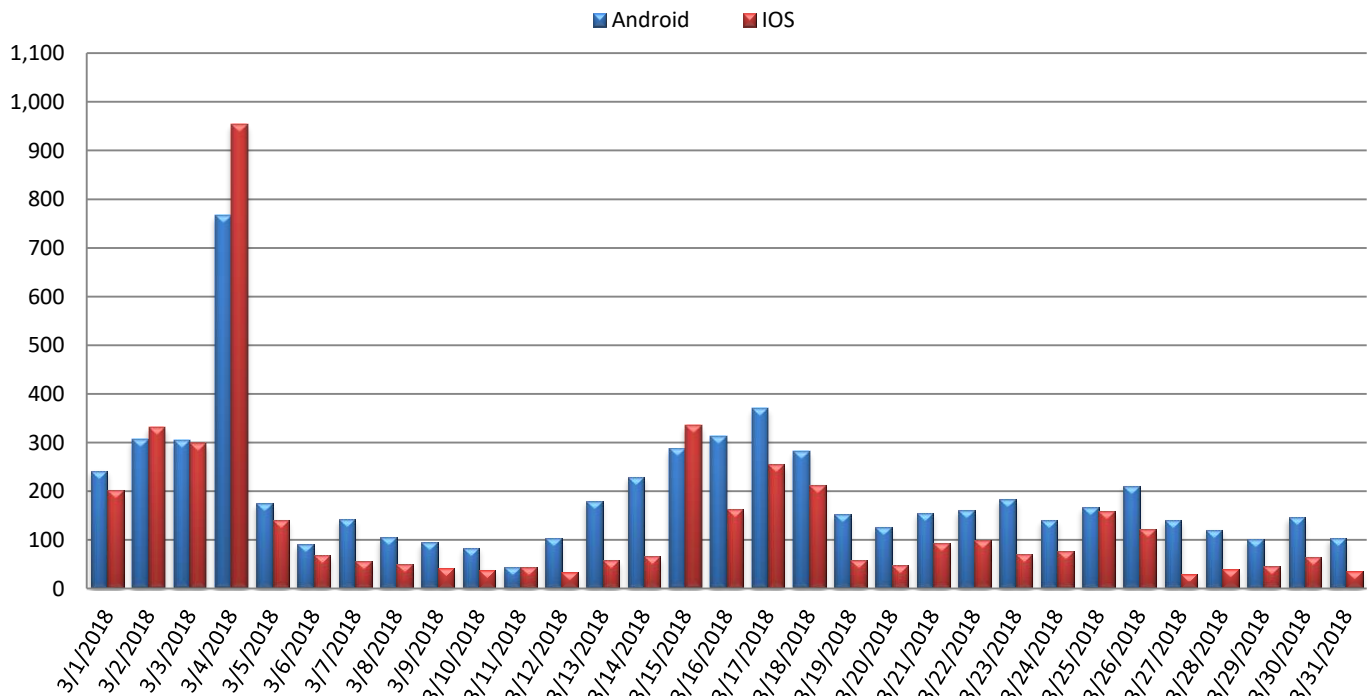
UDOT Traffic App - FY 18

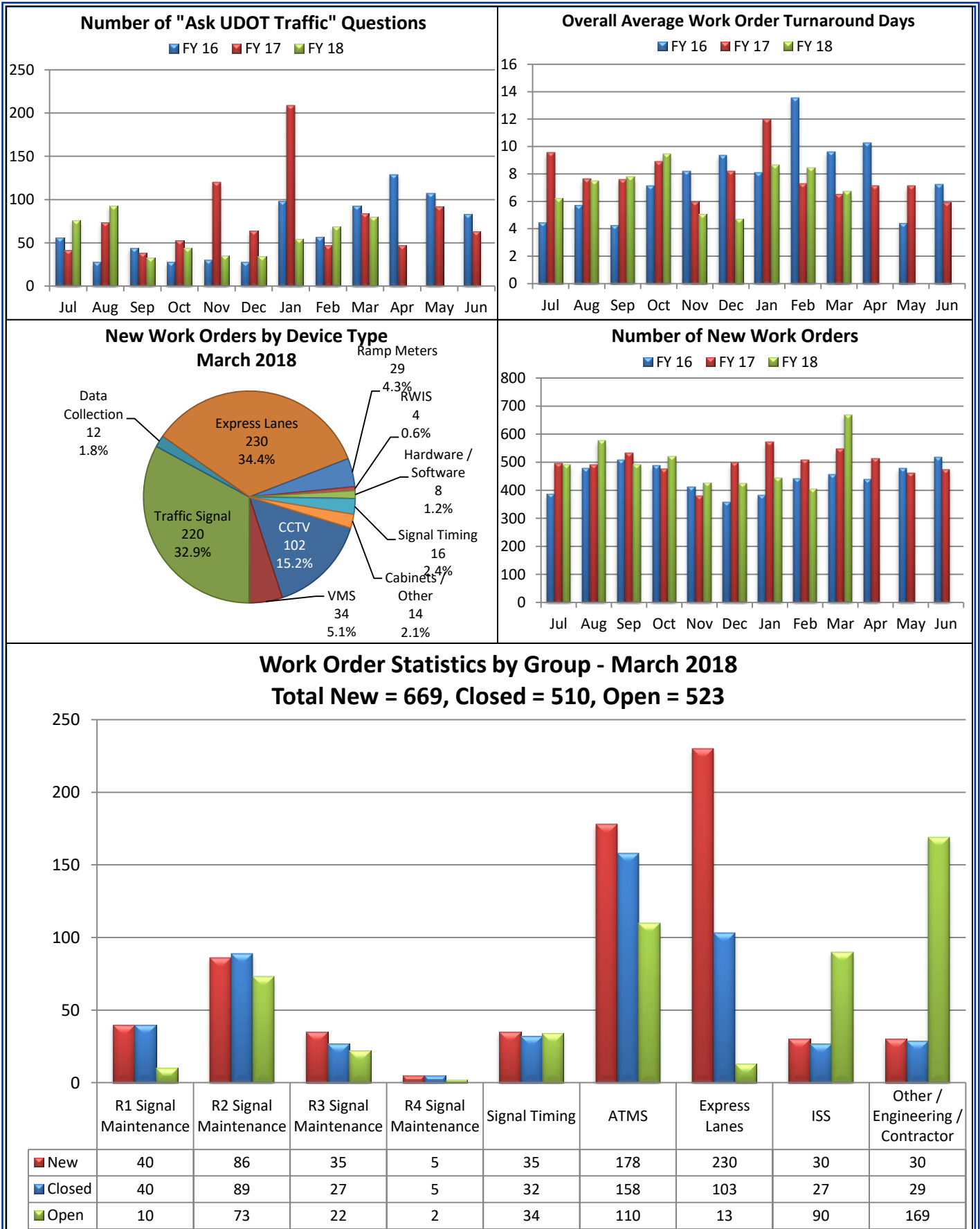


UDOT Traffic App Downloads



UDOT Traffic App Downloads - March 2018





UDOT WEATHER GROUP



Weather Group Statistics

- ◇ 569 – Overall UDOT Weather Interactions (*March record)
- ◇ 78 – Outgoing Weather Alerts
- ◇ 13 – NWS collaborations (*March record – tie)
- ◇ 14 – Road Weather Alerts

Climatology

Most of the state experienced wetter and cooler than average conditions for the month of March, except parts of central and southern Utah were drier than normal and parts of the Uintas and southern Utah were slightly warmer than normal.

There was one significant snowstorm at the beginning of the month; a few more storms impacted the state in the middle and end of the month, but mostly rain fell in the northern Utah valleys.

One of our newest RWIS at the I-215 and I-80 west interchange reported a mean temperature of 42.9 degrees, 0.7 degrees below the Salt Lake City International Airport normal. The airport reported 2.58" of precipitation (normal = 1.79") and 10.5" of snow (normal = 6.5").

Moab reported a mean temperature of 50.6 degrees (normal = 48.8 degrees), 0.73" of precipitation (normal = 0.83"), and a trace of snow, falling on March 18th (normal = 0.3").

For the current monthly climate outlook, please visit:

<http://www.nw-weather.net/UDOTMonthlyOutlook.pdf>

For the current seasonal outlook, please visit:

<http://www.nw-weather.net/UDOTSeasonalOutlook.pdf>

Weather Operations

The podcast that Jeff recorded with Rick Nelson of the AASHTO SICOP in February was posted. It's titled "Episode 8: Timely and Accurate Forecasts" and can be listened to here:

<https://sicop.transportation.org/stwo/>.

Last month's new RWIS site procurement contract was awarded to Sorensen Construction and they will begin in April. The six new sites on the contract include I-15 in Cedar City/Cross Hollow Road (MP 57.03), I-15 in Farr West (MP 350.3), I-15 near the Brigham City airport (MP 368.8), I-70 at Emigrant Pass (MP 82.4), I-80 in Echo Canyon (MP 171.7), and SR-10 between Huntington and Price (MP 54.06).

Jeff Williams and Cody Oppermann also moved a portable RWIS trailer to I-80 in the Skull Valley to monitor crosswinds and blowing dust through the use of a wind sensor, visibility sensor, soil moisture sensor, and camera. Two new permanent sites will be coming online in this valley by the end of spring. Two more will come online at MP 80 and MP 81.4 as well.

Jeff Williams and Scott Jensen met to discuss the Pathfinder project with the director of the National Weather Service's Western Region Headquarters at the Salt Lake City Weather Forecast Office. Later in the month they also met with employees at the National Weather Service's Office of Organizational Excellence. Jeff has also been organizing a Pathfinder Summit here at UDOT in late June with members of the FHWA, the National Weather Service, 20 state DOTs, and the private sector.

Lastly, there was one tour of the TOC Weather Operations room by students at Gateway Academy.

TRAVELER INFORMATION

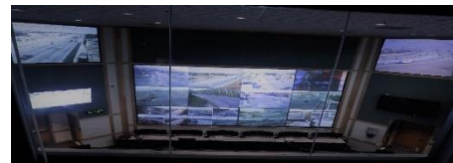
- ◇ Discussed traveler information with I-15 Tech Corridor project teams.
- ◇ Continued UDOT Traffic app/web brainstorm discussions with stakeholders.
- ◇ Represented UDOT at a BYU broadcasting event.
- ◇ Hosted three TOC tours.
- ◇ Coordination for upcoming TOC tours.



CONTROL ROOM

March Stats:

- ◇ Incidents managed: 1640
- ◇ Jpages sent: 455
- ◇ Calls received: 1729
- ◇ Calls made: 1108



Activity

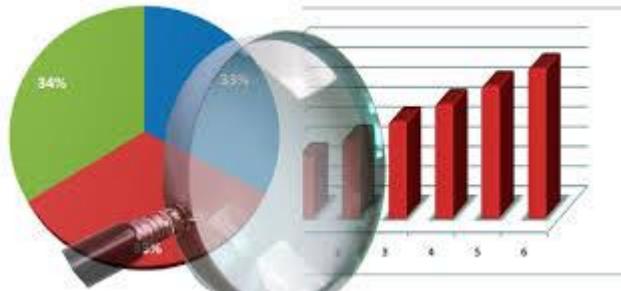
- ◇ The Control Room helped manage one significant TOCL event.
- ◇ Supported the following events: Holi Festival of Colors, Jordan River Temple Open House, Zero Fatality messaging campaign, and Canyonlands Marathon.

Road Work support

- ◇ SR-9 Reconstruction.

TRAFFIC OPERATIONS ANALYSIS & REPORTING

- ◇ Reviewed I-15 NB Region 2 VISSIM model.
- ◇ Model 200 North Kaysville SB ramp meter.
- ◇ I-15 Traffic Study: 400 S SLC to 2600 S WX presentation.
- ◇ Life on State support.
- ◇ Region 4 training on iPeMS.
- ◇ Region 3 support - PG Blvd & interchange VISSIM model review.
- ◇ Region 2 Traffic Impact Study support.
- ◇ Review Jeremy Ranch IACR.
- ◇ MAG workshop support.
- ◇ FHWA Rulemaking support.
- ◇ I-15 SB project support.
- ◇ HERE vs. Google Probe Data Verification.
- ◇ Ramp meter performance metric review.
- ◇ Traffic Analysis Guidelines development.
- ◇ Algorithms for Detector Quality Checks - UTRAC support.
- ◇ Executive Dashboard Development.
- ◇ Express Lane model review and project support.
- ◇ I-15 Traffic Study project management.
- ◇ Little Cottonwood Canyon Bluetooth support.
- ◇ User cost analysis.
- ◇ SHRP2 L04 University of Utah research support.
- ◇ Account requests for probe data and freeway PeMS.
- ◇ Performance based traffic control support.



Traffic Signal Operations

Region 2 Highlights

- ◇ New left-turn phasing active at Rosecrest & Mounttain View in Herriman
- ◇ New Ped. flasher active at SR-111 & Myron Ave
- ◇ New signal complete at SR-138 & Stansbury Pkwy in Tooele Co./Stansbury Park

Region 3 Highlights

- ◇ Re-phased the 800 N. & I-15 SPUI for enhanced operation.
- ◇ Installed pedestrian ramps and protected ped. crossings on all four legs at US-89 & 1600 S. in Mapleton.
- ◇ Installed dual left turn lanes and protected-only left turn phasing at Center St. & Geneva Rd. in Orem.
- ◇ Installed a NB 5-section head for RR preemption and a ped. pole on the SW corner at SR-74 & 100 N. in American Fork.
- ◇ Hired new R3 Signal Tech.

Region 4 Highlights

- ◇ Installed DZ Advance detection along 100 N. at US-6 and at Price River Dr. In Price.
- ◇ Installed Matrix detection to replace old video and loops at seven signalized intersections in Price.
- ◇ Replaced signal heads and replaced lighting with 15 yr. LEDs at five intersections in Price.
- ◇ Continued timing support for traffic signals through the Bluff St. project.



ELECTRONICS FIELD TEAM

- ◇ Completed 15 LFOT inspection, seven of them were for CCTVs.
- ◇ A VMS cabinet located I-15 SB @ 8200 S MM 296.64 was damaged by a snowplow. (MDV) The existing cement pad was retrofitted to work with a 334 cabinet. Remounted all hardware and re-wired the power circuits and fiber-optic.
- ◇ Chain up sign signal head located little Cottonwood / SR – 210 WB was damaged by a snowplow and had to be replaced mounted and rewired.
- ◇ Organized closure at I-15 SB @ 7200 S on-ramp (West Jordan) to replace road pucks for vehicle detection.
- ◇ Work with signal timing on integrating / upgrading channel 1153 located in Farmington.
- ◇ Worked with building maintenance on the design of the new office and started the transition of the ATMS field maintenance crew getting ready for the move.
- ◇ Completed 20 preventive maintenance on VMS sign structures, verifying voltage, vacuuming, organizing, and updating AIMS database.
- ◇ A total of 137 work orders were closed for the month of March.



ELECTRONICS LAB TEAM

- ◇ Inclusive of Digi terminal servers, traffic signal controllers, 2070 controllers, wireless radio, Wavetronix radar and CCTVs, a total of 30 devices were tested/repared.
- ◇ One traffic signal cabinet was setup, programmed, burned in and disbursed to the contractor for SR-140 & Porter Rockwell Blvd.
- ◇ The solar system for the portable trailer was re-designed to get TMS data at I-80 MM 138.6 for Chris Siavrakas.
- ◇ With the assistance of the Lighting Crew Team, the Lab Team repaired and erected the NID pole on I-15 @ 90th S which was knocked down by a car.
- ◇ Performed an LFOT for Non Intrusive Detection at I-15, 11400 S.
- ◇ Deployed two mobile VMS signs at 10200 1300 W, South Jordan to alert drivers of increased pedestrian traffic.
- ◇ Tested and evaluated the Pelco Spectra Professional H.264 CCTV.
- ◇ There are 41 open work orders, 18 which are on hold for loop replacements. The Electronics Lab closed six work orders during the month of March.

EXPRESS LANES TEAM

- ◇ Closed Work Orders: 253
- ◇ Fixed Item Work Orders: 230
- ◇ Lane Controllers: Repaired 20, replaced 18, programmed 46, upgraded 12, rebooted nine, and restarted services for five.
- ◇ Lasers: Rebooted two, replaced one, and upgraded 20 via the contractor.
- ◇ Readers: Rebooted one.
- ◇ Cabinets: Preventative maintenance performed on 17 cabinets.
- ◇ Lane PM's: Six were completed.
- ◇ UPS: Replaced eight batteries. Replaced and rebooted two inverters.
- ◇ VTMS: Rebooted eight.
- ◇ TSI: Replaced one and twisted one head.
- ◇ Relays: Installed four and 17 were installed via the contractor.
- ◇ Assistance was received from all groups and multiple people.



REGION 1 PROJECTS

- ◇ **Statewide Signal Interconnect (12631):** Substantial completion has been met. Integration continues. Very few signals remain and all of Region 1 will be connected. There are a few communication problems related to radio links that are being mitigated.
- ◇ **SR-37; 5100 W. to SR-108 (13037):** Camera has been moved and the 30 day test is in progress.
- ◇ **I-215 Redwood North (12674):** SFM ordered and picked-up.
- ◇ **Sardine Canyon US-89 from Brigham to Wellsville (13744):** Construction has been placed on hold until spring. Construction to resume soon. Mantua Exit CCTV access has been mitigated. New LFOT's will be scheduled shortly.

- ◇ Region 1
- ◇ **I-15; Davis Weber Expressway (13822):** Scoping and design is ongoing. Matthew Smith is working with the contractor on ATMS.
- ◇ **SR-97 (5500 South) & 4300 West (15446):** In design.
- ◇ **SR-108 and 1475 W. (14803):** In design. Will need CDMA connection.
- ◇ **SR-126 and 6000 S. (15800):** In design.
- ◇ **SR-126 and 4800 S. (15801):** In design.
- ◇ **5 VMS Region 1 (16041):** In design. PIH has been completed and ATMS and Fiber comments have been received and passed along to the project team. PS&E is scheduled for 4/25/18.

Region 2 Projects

- ◇ **Mario Cappecchi & 1900 E – New Traffic Signal at the U of U:** This new signal location has a unique challenge to work an existing path across the UTA TRAX Light Rail Line. The ATMS Maintenance Crew was able to locate and validate a conduit path at an adjacent signal that had some spare conduit to the median under the TRAX system. This will make it feasible to get this signal on fiber optic communication and to install a traffic camera. This is a busy location for special events at the University and having this online with a camera will give our signal operations team good tools to support the event traffic management.
- ◇ **Mountain View – 5400 S to 4100 S – ATMS field correction:** Although the design-build team completed this project, a field change for one of the traffic sensor and camera poles, for improved safety, resulted in only a far partial lane being counted. Working with the design-build team, we came up with a quick solution to locate a breakaway pole nearby that already had a conduit crossing the mainline. We were able to get a new foundation poured and the pole erected, and a new traffic sensor installed within a couple weeks.
- ◇ **Little Cottonwood Canyon – Tourism Corridor traffic sensors:** Through an aggressive contract with Narwhal, we were able to install new traffic sensors in the canyon to collect travel times getting through the canyon. This will be vital to helping present alternatives to mitigate congestion surges in the canyon.

REGION 3 PROJECTS

- ◇ **PIN 9994 – US-89; 220 South P.G. to 500 East A.F. :** Project in Design. Plan in hand to be held in April. ITS Program Management added funds to this project in July to continue all the way to 220 South P.G.
- ◇ **PIN 10137 - Provo; US-89 (300 S); 100 East to 700 East:** Procurement contract process is complete. Additional micro duct and fiber installation to be done on a separate procurement contract planned for the near future.
- ◇ **PIN 10265 – SR-198; Woodland Hills Dr to Arrowhead Trail in SF:** Delayed due to ROW. This project will add fiber along this stretch and connect to existing signals.
- ◇ **PIN 10689 - Saratoga Springs; SR-68 Centennial Blvd to Pioneer Crossing:** Project under construction. PineTop will perform Integration work. Fiber cutover and splice still not complete.
- ◇ **PIN 11897 – US-89; Center St to Bulldog Blvd in Provo:** Project in Design. Project limits now extend to 500 South due to drainage requirements. This project will replace the existing fiber and connection to existing signals. It will not be possible to identify funds to fill a gap in fiber just above this project on the Orem/Provo hill as that gap is outside the project limits.
- ◇ **PIN 11982 - Saratoga Springs; SR-85 (MVC) SR-73 to 2100 North:** Project Advertising.
- ◇ **PIN 12158 - Lehi; I-15; Lehi Main St to SR-92:** Still working on setting up a Mini TOC for the Technology Corridor offices. Should be connected in the coming weeks.
- ◇ **PIN 13389 – US-40; Daniels Canyon Passing Lane North of Summit:** Project had preconstruction meeting. This project will add a fiber connection and power to two cameras and an RWIS. ATMS money was added to this project to fill the fiber gap between an existing construction project and this one. With the completion of the project, we will have fiber on US-40 from Heber to Daniel's Summit. The conduit for the fiber was installed by Strata last fall.
- ◇ **PIN 13421 - Springville; SR-77 (400 S); S.F. Main St. to I-15:** Project under construction.
- ◇ **PIN 13668 - Lehi; Main St @ US-89/State St Signal(s):** Project had preconstruction meeting.
- ◇ **PIN 14983 – Continuous Count Stations (CCS) Interstate/Arterial:** Team met to narrow down the list of potential locations for Utah County count stations. Horrocks will provide an estimate of what it will take to connect all of them.

- ◇ **PIN 15275 – Saratoga Springs; SR-68 Village Pkwy to Grandview:** Project advertising.
- ◇ **PIN 15570 – Pioneer Crossing/I-15 Int. Ramp Improvements:** Project will advertise in April.
- ◇ **PIN 15573 US-191 Guardrail Replacement:** Project in Design. Coordinating with project to ensure they do not impact fiber placement by Strata.
- ◇ **American Fork Canyon ATMS:** Utah County project will re-align Canyon Road and SR-92. Region 3 is working with the Forest Service, the National Park, American Fork City, and Utah County to place conduit and fiber up AF Canyon. A waterline project will install the conduit and fiber from the mouth of the canyon to just before Timpanogos Cave. Environmental work must be complete to determine timeline. Maintenance paving project has been moved to 2020 in coordination with possible fiber project up to Tibble Fork.
- ◇ **PIN 10266 - Provo; SR-256; 800 East to Univ Ave BRT:** Project under construction. Two of the new CCTV's installed failed and required replacement.
- ◇ **PIN 13244 - Ut. Co. Signal Interconnect:** Fiber installation inspection shows cable was stressed during installation. The damage is within the first 600' on the south end of US-89 in Springville. Working with contractor on repair options.
- ◇ **PIN 13061 - American Fork; US-89 @ Main St./200 East:** Project complete.

REGION 4 PROJECTS

- ◇ **10711 – US-6 Fiber Upgrade Helper to Price:** Waiting for FiberTel (Contacted by Emery Telephone) to finish the fiber drop connection to the CCTV on US-191 near Castle Gate. No change.
- ◇ **10783 – SR-18; St. George Blvd to Sunset Blvd:** Project under construction. No Change
- ◇ **11467 – I-15; M.P. 22 to M.P. 28 Climbing Lane:** Project under construction.
- ◇ **11515 – SR-9; Rockville to Zion National Park:** Project under construction. No change
- ◇ **12780 – I-15; Bingham Rd. to Dixie Dr.:** Project under construction. No change.
- ◇ **14366 – SR-9; Passing Lanes, Midway to Rockville:** Project in design.
- ◇ **14908 – ITS upgrades Dixie MPO:** Concept report with on-line interactive map being developed.
- ◇ **14912 – US-6/US-191; Helper to Blanding:** Project complete.

- ◇ **15667 – Region 4 Signal Interconnect:** – NO CHANGE: Generated WTO to develop signal connection concept report for those locations needing connectivity.
- ◇ **16471 – SIGNAL: SR-120 @ Technology Dr.; Richfield:** – Held Pre construction site visit.

STATEWIDE PROJECTS

- ◇ **16254 – Statewide Maintenance Shed Connectivity:** Construction underway to connect fiber to: R2 Aviation Shed; R2 Grantsville Shed; R2 Murray Complex (Maintenance shed, Sign and Paint Shed, UHP Headquarters); R2 SL Metro East Shed; R2 West Jordan Shed; SL South Valley Shed; R3 Provo/Orem Shed.

ITS STANDARDS & SPECIFICATIONS

- ◇ The 2017 Construction Inspector's Guide Chapter 7 - Traffic Signals, Lighting and ATMS was sent to the TMD for review. A meeting of all the TMD staff that need to contribute to the review won't take place until April. It was noted that 16530 Electrical Power needs to be added to the chapter.
- ◇ Continued to work within UDOT to make a Supplemental for Standard Specification 02821 – Chain Link Fencing and Gates. A Supplemental for Standard Drawing FG 6 Chain Link Fence, will accompany the revisions to 02821.

ITS PROCUREMENT

- ◇ The new ITB for 334C and Basic Size 1 - Traffic Signal Control Cabinets was awarded.
- ◇ The new ITB for 336 Traffic Signal Control Cabinets was awarded.
- ◇ Work continued on the new radio supply contracts for the Utah Communications Authority and statewide users.
- ◇ The RFP for the 2070 advanced transportation controller was advertised.
- ◇ The I84 Echo Jct. - Speed Warning Signs are in need of replacement. J.T. Dziatlik of The Field Team is working on researching replacement signs and procurement.

Special Projects:

- ◇ WFRC funding applications for the year 2024 were submitted to WFRC. Emissions worksheets were completed by Tyler Laing and submitted in March.
- ◇ Work continues to develop the Wiki version of the ATMS Design Manual of Instruction.



So Long Rob, but not good bye.

Rob Clayton, who has been the director of the Traffic Management Division since 2011, is leaving to be the new Region Three director. Congratulations Rob! We will miss you here at Traffic Management.

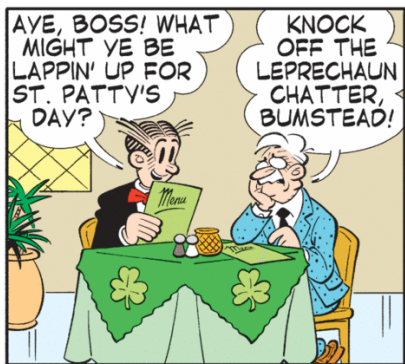


More changes are on the way.

March Madness



KeepInspiring.me



Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign



Did you know? While the chances of being struck by a meteor are extremely slim, there have been a number of documented cases: On June 21, 1994, Jose Martin of Spain was driving with his wife near Madrid when a 3-pound (1.4-kilogram) meteor crashed through his windshield, bent the steering wheel and ended up in the back seat. Martin suffered a broken finger while his wife was uninjured.

